CALIFORNIA, ~~STATE~~ BOARD OF HEALTH.

MONTHLY BULLETIN.

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VITAL STATISTICS FOR JULY.

Summary.—A total of 579 living births were reported for July from thirty-four counties, including thirteen freeholders' charter cities, all except 12 of the children being white. There were 10 sets of twins, and 6 children were at least the tenth born to their respective mothers. However, more than one third were first-born children and over three fourths were no more than the fourth in order of birth. Considerably over half of the white children had one or both parents born in the Golden State, and of the white mothers alone more than two fifths were native Californians. Three eighths of the white mothers were under 25 years of age, and more than four fifths altogether were under 35 years.

For July 547 marriages were reported from thirty-three counties, all except 7 being marriages of whites. At nearly three fourths of the weddings the marriage performed was the first for each party, and only in about one case in fifteen had both parties been married before. Somewhat more grooms than brides had not been previously married, about five sixths of the grooms, against four fifths of the brides, being single. In about five ninths of the marriages one or both parties were native Californians, and of the brides alone nearly half were natives of this State. Three fifths of the white brides were under 25 years of age, and altogether five sixths were less than 35 years old.

A total of 1,211 deaths were reported from forty counties, including fifty-six cities and incorporated towns. The principal causes of death were general diseases (especially other than epidemic diseases), violence, and diseases of the circulatory system, the nervous system, the digestive system, the respiratory system, and the genito-urinary system. One eighth of all deaths in the State were from tuberculosis, but many of the persons thus dying were only recent residents.

Births.—Returns for July from thirty-four counties, including thirteen freeholders' charter cities, give a total of 579 living births. All were white children, except 7 negroes, 2 Chinese, and 3 Japanese. The total number of males was 290 as compared with 289 females, but among the white children alone the boys numbered 288 and the girls only 279.

There were 10 plural births, each being a case of twins. Two children were the twelfth born to their respective mothers, 3 the eleventh, and 1 the tenth. On the other hand, 208 or 35.9 per cent were first-born children, 120 or 20.7 per cent second children, 77 or 13.3 per cent third children, 41 or 7.1 per cent fourth children, and only 88 or 15.2 per cent the fifth or over born, the information not being stated for 45 or 7.8 per cent of all. By taking successive totals, it appears that while more than one third (35.9 per cent) were first-born, about five ninths (56.6 per cent) were second children or less, seven tenths (69.9 per cent) were third children or less, and over three fourths (77.0 per cent) were no more than the fourth born to their mothers.

Of all the children born to the 579 mothers having births in July the number living at the time of registration was as follows: none, 13 or 2.3 per cent; one, 201 or 34.7 per cent; two, 127 or 21.9 per cent; three, 70 or 12.1 per cent; four, 34 or 5.9 per cent; five or more, 62 or 10.7 per cent; and not stated, 72 or 12.4 per cent.

Of the 567 white children, 381 or 77.2 per cent had both parents native (or unknown) and 186 or 32.8 per cent had one or both parents foreign born. The 381 of native parentage included 244, or 43.0 per cent of the total, having one or both parents born in California and 137, or 24.2 per cent of all, having both parents born elsewhere in the United States. The 186 wholly or partly of foreign parentage comprised 57, or 10.1 per cent of all, with one parent born in California and 129, or 22.7 per cent of the total, with both parents born elsewhere. Altogether 301 or 53.1 per cent of the white children had one or both parents born in the Golden State. That is, considerably over half were wholly or partly of California parentage.

The nativity of merely the mothers of the 567 white children was as follows: California, 249 or 43.9 per cent; other states, 211 or 37.2 per cent; and foreign countries, 107 or 18.9 per cent. More than two fifths of the white mothers were native Californians.

By age periods, the white mothers were distributed thus: under 25 years, 210; 25 to 34 years, 257; 35 to 44 years, 73; 45 years and over, 1; and age unknown, 26. Or, stated proportionally, of each 1,000 there were 370 under 25 years, 453 from 25 to 34 years, 129 from 35 to 44 years, 2 at least 45 years of age, and 46 age unknown. Over four ninths (45.3 per cent) of the white mothers were from 25 to 34 years of age and three eighths (37.0 per cent) were under 25 years, so that altogether over four fifths (82.3 per cent) were less than 35 years of age.

Marriages.—For July, altogether 547 marriages were reported from thirty-three counties. Except for 7 marriages of negroes, the unions were all between persons of the white or Caucasian race. In 396 cases, or nearly three fourths (72.4 per cent) of all, the marriage performed was the first for each party, both groom and bride being single. In 67 instances it was the first marriage of the groom but not of the bride, in 48 the first of the bride but not of the groom, and in 36, or about one case in fifteen, it was the second or third marriage of both parties. Of

the grooms, 463 or 84.7 per cent (about five sixths) were single, 51 or 9.3 per cent were widowed, and 33 or 6.0 per cent were divorced, while of the brides the single were 444 or 81.2 per cent (about four fifths of all), the widowed 64 or 11.7 per cent, and the divorced 39 or 7.1 per cent. Somewhat more grooms than brides had not been previously married, the difference being made up mainly in the greater number of widows than of widowers remarrying.

Of the 540 marriages of whites, 260 or 48.2 per cent were unions between Californians or between Californians and other natives, 115 or 21.3 per cent were between persons born elsewhere in the United States, 44 or 8.1 per cent were between Californians and foreigners, and 121 or 22.4 per cent were between other natives and foreign-born whites. In altogether 304 cases, or about five ninths (56.3 per cent) of all marriages of whites, one or both parties were native Californians.

The nativity of the white brides alone was as follows: California, 254 or 47.0 per cent; other states (including 5 of unknown nativity), 186 or 34.5 per cent; and foreign countries, 100 or 18.5 per cent. Nearly half were born in the Golden State.

The white brides were distributed thus by age periods: under 25 years, 327; 25 to 34 years, 137; 35 to 44 years, 53; and 45 years and over (including 2 of age unknown), 23. Or, the proportion per 1,000 of all ages was as follows: under 25 years, 605; 25 to 34 years, 254; 35 to 44 years, 98; and 45 years and over, 43. Three fifths (60.5 per cent) of all were under 25 years of age and one fourth (25.4 per cent) were from 25 to 34 years, so that altogether five sixths (85.9 per cent) were less than 35 years old.

Deaths.—Returns for July from forty counties, including fifty-six cities and incorporated towns, give a total of 1,211 deaths, exclusive of still-births not tabulated. Reports that no deaths occurred in the month were received from the Registrars of two mountain counties and seventeen cities and towns. The calculation of a death rate is omitted because the returns from some registration districts cover only part of the month.

Causes of Death.—The following table shows the number and proportion of deaths from the diseases included under each of the main headings of the International Classification:

Class.	Number.	Proportion.
ALL CAUSES	1,211	10,000
General Diseases	297	2,453
Epidemic diseases	67	553
Other general diseases	230	1,900
Nervous System	144	1,189
Circulatory System	161	1,330
Respiratory System	91	751
Digestive System	99	818
Genito-urinary System	63	520
Childbirth	13	107
Skin Diseases	1	8
Locomotor System	1	8
Malformations	7	58
Early Infancy	36	297
Old Age	53	438
Violence	210	1,734
Ill-defined Diseases	35	289

About one fifth of the deaths were caused by general diseases other than epidemic diseases. The prominence of this class is explained by

the fact that it includes such diseases as tuberculosis and cancer. The notable proportion of deaths ascribed to violence is accounted for by the explosion on the U. S. S. "Bennington" in San Diego harbor. Next to general diseases and violence, the main causes of death in California were diseases of the circulatory system, of the nervous system, of the digestive system, of the respiratory system, and of the genito-urinary system, in the order named.

he ta ble below gives similarly the number and proportion of deaths from the leading specific diseases in the State:

Disease.	Number.	Proportion.
ALL CAUSES	1,211	10,000
Tuberculosis	151	1,247
Heart Disease	106	875
Burns and Scalds	78	644
Pneumonia	59	487
Bright's Disease	53	438
Old Age	53	438
Apoplexy	45	371
Cancer	44	363
Diarrhea and Enteritis	43	355
Paralysis	34	281
Typhoid Fever	26	215
Meningitis	25	206
All others	494	4,080

Nearly all the deaths from burns and scalds resulted from the "Bennington" disaster. One eighth of all deaths in California were from tuberculosis, but many of the persons thus dying were only recent residents. Over one death in twelve was due to heart disease; about one in twenty to pneumonia, Bright's disease, or old age; about one in thirty to apoplexy, cancer, diarrhea and enteritis, or paralysis; and about one in fifty to typhoid fever or meningitis.

PUBLIC HEALTH ASSOCIATION.

In October the California Public Health Association will hold its semi-annual meeting in San Francisco. This conference was organized and is maintained for the purpose of bringing together for consultation and discussion the health officers of the State and others interested in sanitary affairs. The past meetings have been of much interest and many valuable papers have been read, and the discussions have shown a keen interest taken by those present and a deep insight into the needs of the State. Already the good results are becoming manifest in the general awakening of the health departments of the State, and through them of the people. The State Board of Health is in constant receipt of letters from the authorities of different municipalities asking for information or aid in installing a sewage system or methods of scientifically destroying the sewage.

Sanitation and saving life by preventing disease are beginning to be considered among the functions of government, and the time will come when it will be held as culpable to sacrifice a person's life or health by exposure to a preventable disease, either maliciously or carelessly, as it is to expose them to danger from any other cause. That time will come only when the people are educated to the dangers to which they are exposed and the methods of avoiding them. This education must begin with the health officer. Such officers are looked upon as the leaders in sanitary matters, and upon them largely depends the enforcement of the law. To do this effectively they must be earnest, well-

informed, and firm, and in no way can they attain these qualities better than at these conferences. Counties and municipalities should insist that their health officers attend these meetings, so that a uniform system of sanitary work may be carried on throughout the State. The necessary expenses of such a trip should be borne by the county or town represented. Such an expenditure will yield better returns than any other it is possible to make. No health officer, however, should allow the expense to keep him away. The expense of the meeting is borne by the State, so there are no dues. By making these meetings large and enthusiastic, a sentiment can be developed throughout the State that will recognize the justice of this expenditure.

In the August Bulletin will be published the program and full particulars of the meeting.

DISINFECTION OF SCHOOLS.

Reports for the past few months show that diphtheria is quite extensive throughout the State. Other contagious diseases are also more or less prevalent, and many children have died during the past year from these diseases—lives sacrificed to carelessness and ignorance. There are constantly cases of mild diphtheria—so mild as to be unrecognized except by a bacteriological examination—going to school, and many of these deaths have been traced to them. These mild cases, however, are as contagious as the more severe, and cases resulting from them are as apt to be fatal. If all cases could be discovered and excluded before they had contaminated the school the danger would be less, but that can not be done until we have pupils examined daily. We must therefore minimize the danger by disinfecting the schoolrooms. This should be done at least every month, and if there are reported cases, oftener. The expense would not be great compared with the good results. Sulphur or formaldehyde could be used, but always in sufficient quantities to kill the germs. If sulphur is used, burn 5 pounds to every 1,000 cubic feet; or if formalin, 16 ounces of the 40% solution used in any of the approved methods, to the same space, in all cases keeping the room closed for twelve hours. We strongly urge the health and school authorities to work in harmony in this matter and protect the health and lives of the children.

DUST DANGERS.

The dust of the city streets consists of the disintegrated particles of its surface, soil brought upon it in various ways, dried and pulverized excreta of animals, sweepings from stores, saloons, hospitals, etc., and carries a large amount of the discharges from human lungs, throats, and nostrils, many and perhaps most of them diseased. The dust is filthy in the extreme, and in it lurks great danger to health. There is no doubt but what many of the cases of contagious diseases, the source of which can not be traced, may justly be laid to dust. Oftentimes children with mild cases of diphtheria are on the streets and expectorate freely the discharges from their diseased throats. In a short time this discharge is dried and flying through the air, to be taken up in any one of the many possible ways. There can be no doubt of the danger and needs of prevention, but the latter is beset with difficulties. Still, much can be done in this direction. While expectorating should be

prohibited on the sidewalks, it can not be entirely prevented on the streets. All possible care should be taken to keep filth from our streets, but it is impossible to entirely do so, and our efforts must largely be directed to its removal with the least exposure, and to avoiding breathing or eating the dust. On smooth-surfaced streets there are machines which suck up the dust without causing it to fly in the air, or it can be washed away with a strong stream of water from a hose. Sweeping is impracticable as a rule, for if the street is not wet the air is filled with dust, and if it is wet enough to prevent the dust flying it makes a mud, which sticks to the surface and dries in a few minutes and but little is gained. Most streets are not smooth, and in any case, we will have much dust and must look to avoiding it when possible. All breathing should be through the nose, and this especially should be taught to children. They should be made to understand the dangers of mouth breathing and given the reasons for breathing through the nose.

Perhaps the greatest danger from dust is through the exposure of foods in and in front of stores. Berries and other fruit are usually exposed where they will catch the greatest amount of dust. These are often eaten without washing, and even if washed the filth is not entirely removed. Groceries of different kinds are frequently exposed, and the counters of bakeries are covered with pies and cakes—and dust.

There is no law to prohibit this exposure, nor is it necessary, for the people have a stronger power than the law—to purchase nothing that is needlessly exposed to contamination from dust.

Since the last issue of the Bulletin, a representative of the State Board has inspected one of the important rivers of the State, a river which furnishes drinking water for towns and also water for natural ice. The conditions of this river and its tributaries were far from sanitary. Individuals and towns are allowing their sewage to flow into it; cattle corrals are on the banks, so that the drainage is directly into the stream; hog yards are extended from bank to bank on the small tributaries, so that the swine can be easily cleansed, and dead stock has been allowed to remain uncared for in the water. The people using the water, and especially the ice companies, are desirous of having the conditions improved and, as a rule, are offering the Board every assistance in their power. Notice has been served upon the violators of the law, and we sincerely hope that this great danger to the public health will soon be eliminated.

The Bulletin acknowledges the receipt of a copy of "Practical Hygiene for Home and School," by George W. Newton of the Iowa Normal School. The author has successfully endeavored to put before his readers a clear, concise statement of scientific truths relating to hygiene. The language is clear, and not so scientific but that the child can understand it. The book is filled with good suggestions and, what is perhaps as meritorious, contains little that is objectionable. If the twenty-six pages devoted to alcohol had been divided and half given to the study of "Air," with instructions as to proper breathing and the dangers of living where there is not an ample supply, there would have been a distinct gain. The book, however, is a valuable addition to our school literature on hygiene, and is a long step in the right direction.

STATE HYGIENIC LABORATORY.

As stated in a previous issue of the Bulletin, the laboratory is prepared to do work for health officers in districts not having access to laboratory facilities. Containers suitable for collecting sputum, blood from suspected typhoid cases, and material from suspected diphtheritic patients, and ice chests provided with a sterilized container for collecting samples of water suspected of being polluted by sewage, will be sent upon application. Directions for the collection of material and shipment will accompany each container. The value of results of the work in the laboratory is directly dependent upon the care with which the directions are followed in collecting and shipping the pathological material.

In addition to work upon material from suspected cases of diseases in man enumerated above, the laboratory is prepared to make examinations for county or municipal veterinarians who do not have access to local laboratories.

At present the laboratory can only, as a general practice, undertake examinations of material from suspected cases of certain animal diseases, under the conditions stated below. Correspondence is highly desirable before other material is submitted.

Anthrax.—A suitable container, with directions for use, will be sent on application. In cases when the container is not at hand, an ear of the dead animal may be sent. Cut it off close to the head, place it in a Mason fruit-jar, which in turn should be packed in a box with sawdust.

Tuberculosis.—Occasions for examination of material from the diseases in cattle will arise but rarely. Circumstances sometimes make desirable a positive diagnosis by bacteriological examination of lesions. Material should be selected with a view of representing a broad variety of lesions. It may be placed in a tin can with a tight cover. This, in turn, should be packed in a box of ice and sawdust, for shipment by express.

Actinomycosis.—A mailing case, suitable for transporting pus from the tumor, will be sent on application. In the absence of this, pus may be shipped by express in a tightly corked bottle.

Express charges must in all cases be prepaid, as the laboratory has no appropriation for this purpose.

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Director State Hygienic Laboratory.

ON THE OCCURRENCE OF HYDROCYANIC ACID IN JOHNSON-GRASS.

On the 26th of July last, word was received at the University of California that cattle were dying at Los Banos. Owing to the nature of the symptoms it was decided to make a chemical analysis of Johnson-grass (*Sorghum halepense*), which appeared to be the cause of the deaths. The result of the chemical analyses showed most conclusively that the grass contained hydrocyanic acid in appreciable quantities. A request was then made to the owner of the cattle for another specimen of the Johnson-grass, and also of one of a rank-growing grass at the same stage of growth as the Johnson-grass, but which did not kill

the cattle. Upon the receipt of the specimens at the laboratory, chemical examinations were made, with the result that hydrocyanic acid was found in the fresh Johnson-grass to the extent of five hundredths of one per cent; and to be entirely absent from the other specimen—barnyard-grass (*Panicum crus-galli*). This is the first time in California (to our knowledge) that hydrocyanic acid has been found in Johnson-grass.

In Bulletin No. 77, issued in January, 1903, by the Agricultural Experiment Station of the University of Nebraska, are given the results of a similar investigation made there with reference to common sorghum and kaffir corn, both of which are relatives of the Johnson-grass. The following paragraph, referring to antidotes, is taken from the bulletin in question:

"Prussic acid has a tendency to unite with certain carbohydrates, forming additional products. These compounds are much less poisonous than the free acid. Both glucose and milk sugar unite with prussic acid to some extent even in dilute solutions. Aside from this action, these carbohydrates retard the action of enzym in liberating prussic acid. These facts suggest that, in case the animal is not in such a condition as to render medical treatment out of the question, the following may be effective: A strong solution of glucose, which nearly every farmer has on hand in the form of 'corn syrup' or molasses, may be administered. Large quantities of milk have in a number of instances been administered, apparently with good effect. In all cases the animal should have as much fresh air as possible."

Further Analyses of so-called Evaporated Creams.

Lab No.	Brand.	Manufacturer.	Water.	Casein, etc.	Fat.	Lactose.	Mineral Matter.
586	Pet brand evap. cream	Helvetia Milk Cond'g Co..	70.47	7.57	9.90	10.42	1.64
587	Red Ribbon evap. cream..	Elmira Con. Milk Co.	78.81	5.87	5.70	8.33	1.29
588	Silver Cow evap. cream...	St Charles Milk Cond'g Co.	70.73	7.42	9.30	10.93	1.62
593	Alpine cream	Alpine Evap. Cream Co. .	75.13	6.72	7.20	9.46	1.49
594	Pioneer brand evap. cream	Borden Con. Milk Co.	70.45	7.27	10.20	10.55	1.53

As previously pointed out in last month's Bulletin, the labels of these so-called evaporated creams are entirely at variance with their food values. To say the least, they are misleading to the laity.

M. E. JAFFA.

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